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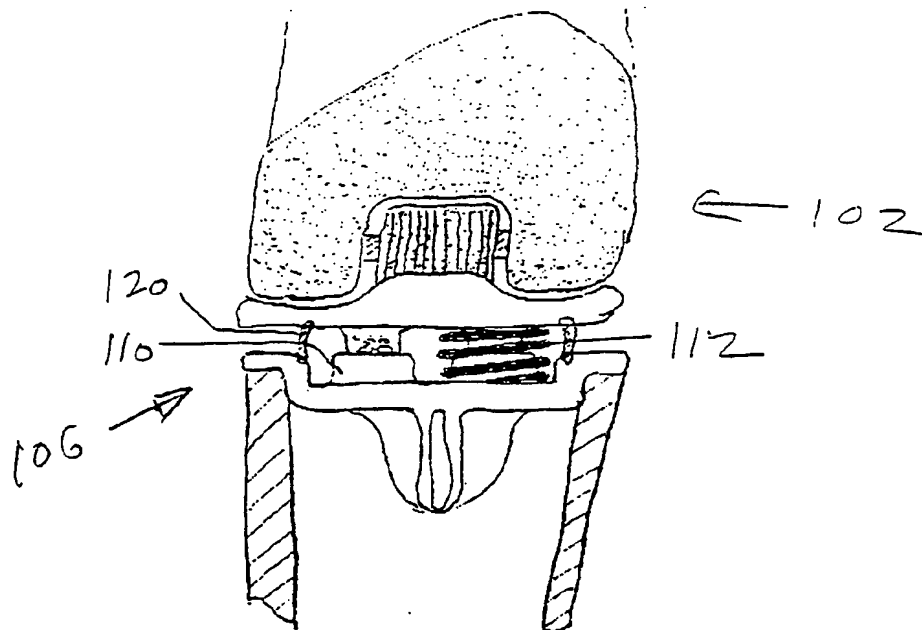
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(54) Title: SHOCK-ABSORBING JOINT AND SPINE REPLACEMENTS



(57) Abstract: Numerous joint replacement implant embodiments including a total knee replacement implant including a femoral component (102) having a wheel (104); and a tibial component (106) including a shock-absorbing component with a piston assembly (110) and spring (112). Said implants contain a cushioning or shock-absorbing member to dampen axial loads and other forces. In many embodiments, fluid is forced rapidly from the device wherein compression and dampening is achieved by valves or other pathways that allow for a slower return of the fluid back into the implant as the pressure is relieved.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61F 2/38

US CL : 623/20.21

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 623/20.21, 17.12, 22.30, 23.17

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,358,525 A (FOX et al) 25 October 1994 (25.10.1994), see entire document.	1,4-5,7-8,15-16,18,22-23
X	FR 2723841 A (FABIEN et al) 23 August 1994 (23.08.1994) see entire document.	1-6,9-13,17-18,22-23
X	US 3,648,294 A (SHAHRESTANI) 14 March 1972 (14.03.1972), see entire document, note membrane 34.	1-5, 8-13, 15-18, 22-23
X	US 4,932,969 A (FREY et al) 12 June 1990 (12.06.1990), see entire document.	1m 3-6, 9-13, 17-18, 22-23
X,P	US 2002/0151978 A1 (ZACOUTO et al) 17 October 2002 (17.10.2002), see all embodiments.	1-6, 8-11, 13, 15-18, 22-23

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